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Diseases Insects Pests

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# Guide to Weed Control in Potatoes

This factsheet is a quick reference for selecting a herbicide-brand weed control program in potato crops. The choices include herbicides that can be applied before planting, after planting but before crop emergence, or after crop emergence. In most instances, only one herbicide or combination can be used; however, non-residual herbicides such as Gramoxone, Poast, Fusilade II, Excel and Hoe Grass can be used, if needed, as supplemental treatments.

Herbicides registered specifically for the control of annual grasses and quackgrass are listed in Table 1. In Table 2, only the most commonly occurring weeds are listed; however, most of the herbicides also control other weeds. Consult the herbicide label or *Crop Protection with Chemicals*, Agdex 606-1 for additional information on the weed controlled by each chemical. The label should be consulted for specific details with regard to water volume, pressure, timing and potato cultivar restrictions if any.

Planting operations should not expose untreated soil if herbicides have been incorporated prior to planting. In instances where post-emergence herbicides have been selected, they should be applied when broadleaved weeds are small (less than 5 cm tall) or at the proper leaf stage for grasses. Canada thistle and perennial sow thistle are not controlled by any of the herbicides registered for use in potatoes.

**Table 1. Registered herbicides for control of annual grasses and quackgrass in potatoes**

| Herbicide | Product per acre | Grasses controlled |
|---|---|---|
| Fusilade II - 125 EC | 240 mL | volunteer corn (2-5 leaf stage) |
| | 320 mL | barnyard grass, Persian darnel, volunteer barley and spring wheat (2-5 leaf stage) |
| (Can be tank mixed with Lexone or Sencor for early post-emergence application) | 400 mL | wild oats, proso millet (2-5 leaf stage) |
| | 570 mL | green and yellow foxtail (2-4 leaf stage) |
| | 400 mL | quackgrass (3-5 leaf stage) top growth suppression |
| | 800 mL | quackgrass (3-5 leaf stage) season long control |
| Hoe Grass 284 EC | 1.4 L | wild oats, green and yellow foxtail, barnyard grass (1-4 leaf stage); Persian darnel (1-3 leaf stage); volunteer corn (15-25 cm) |
| Poast (184 g/L) + Merge adjuvant | 325 mL | barnyard grass, green and yellow foxtail, Persian darnel, proso millet, volunteer corn (1-6 leaf stage) |
| | 405 mL | heavy infestations |
| Add Merge adjuvant at 0.2-0.4 L per acre for a spray volume of 20-44 L/ac. Use 0.4 L/ac for heavy infestations and 0.4-0.8 L/ac for quackgrass. | 445 mL | wild oats (1-6 leaf stage) and volunteer cereals plus grasses listed above |
| | 570 mL | heavy infestations of wild oats, volunteer cereals |
| | 1.09 L | quackgrass suppression, apply up to 3 leaf stage (8-12 cm tall) |
| Fusilade II 125 EC | 160 mL | green foxtail, volunteer spring cereals, wild oats |
| + Poast (184 g/L) + Assist or Merge or Superior oil concentrate at 0.5% v/v | 210 mL | |
| Excel Super (80.5 g/L) | 510 mL | wild oats, green and yellow foxtail, barnyard grass, volunteer barley (1-6 leaf stage) and volunteer corn (5-25 cm) |

**Copies of this and related publications may be obtained from the Print Media Branch, Alberta Agriculture, 7000 - 113 Street, Edmonton, Alberta T6H 5T6 or Alberta Agriculture's District Offices.**

**Table 2.**

| Herbicide | Product rate per acre | Weeds controlled | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Barnyard grass | Green foxtail | Kochia | Lamb's-quarters | Mustards | Quackgrass | Redroot pigweed | Russian thistle | Smartweeds | Volunteer cereals | Wild buckwheat | Wild oats |
| **Before planting** | | | | | | | | | | | | | |
| Dual 960E | 0.8-1.1 L | | | | | | | | | | | | |
| Eptam 8E | 1.7-3.4 L | | | | | | | | | | | | |
| Eptam 8F + Lexone DF | 1.7-2.2L + 140-220 g | | | | | | | | | | | | |
| Eptam 8E + Lexone L | 1.7-2.2 L + 200-345 mL | | | | | | | | | | | | |
| Eptam 8E + Sencor 500F | 1.7-2.2 L + 225-345 mL | | | | | | | | | | | | |
| Eptam 8E + Sencor 75DF | 1.7-2.2 L + 150-225 g | | | | | | | | | | | | |
| Lexone DF | 140-220 g | | | | | | | | | | | | |
| Lexone L | 220-345 mL | | | | | | | | | | | | |
| Roundup | 1-4.9 L | **For control of perennial weeds** | | | | | | | | | | | |
| Sencor 500F | 225-345 mL | | | | | | | | | | | | |
| Sencor 75DF | 150-225 g | | | | | | | | | | | | |
| **After planting, but before crop emergence** | | | | | | | | | | | | | |
| Afolan F | 1.09-1.6 L | | | | | | | | | | | | |
| Dual 960E | 0.8-1.1 L | | | | | | | | | | | | |
| Eptam 8E (incorporated) | 1.7-2.2L | | | | | | | | | | | | |
| Gramoxone | 1.0-1.75 L | **Kills top growth of perennial weeds, kills most annuals** | | | | | | | | | | | |
| Lexone DF (irrigated) | 260-567 g | | | | | | | | | | | | |
| Lexone L (irrigated) | 400-910 mL | | | | | | | | | | | | |
| Linuron 400L | 1.11-2.23 L | | | | | | | | | | | | |
| Lorox L | 0.91-1.82 L | | | | | | | | | | | | |
| Lorox DF | 0.9-1.8 kg | | | | | | | | | | | | |
| Patoran FL | 1.7-2.21 L | | | | | | | | | | | | |
| Patoran FL + Dual 960E | 1.7-2.21 L + 0.8-1.1 L | | | | | | | | | | | | |
| Sencor 500F | 225 mL | | | | | | | | | | | | |
| Sencor 75DF | 150 g | | | | | | | | | | | | |
| **After crop has emerged** | | | | | | | | | | | | | |
| Eptam 8E (sprinkler) | 1.7-2.21 L | | | | | | | | | | | | |
| Gramoxone (ground crack) | 610 mL | **Kills top growth of perennial weeds, kills most annuals** | | | | | | | | | | | |
| Lexone L (dryland)[y] | 220 mL | | | | | | | | | | | | |
| Lexone L (irrigated)[y] | 445-610 mL | | | | | | | | | | | | |
| Lexone DF (dryland)[y] | 140 g | | | | | | | | | | | | |
| Lexone DF (irrigated)[y] | 285-390 g | | | | | | | | | | | | |
| Sencor 500 F[y] | 225 mL | | | | | | | | | | | | |
| Sencor 75 DF[y] | 150 g | | | | | | | | | | | | |

– shaded areas indicate herbicide is registered for control of the weed specified.

[y] – Sencor and Lexone can be tank mixed with Fusilade II 125 EC.

Notes: – Sencor, Lexone, Dual and Gramoxone have varietal restrictions on their labels.
– Recropping restrictions should be noted for Sencor and Lexone.
– Check label for guidance in selecting a rate when a range of rates is specified.

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